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HiPath 2000 – Fresh Impetus through IP Communication

The new HiPath 2000 combines IP routing functionality with support for the full range of ComScendo features - all in a single system. In enterprises with up to 30 employees it opens up simple and rapid access to voice and data communication using the Internet Protocol (IP).

HiPath 2000 has a rich range of features and enables you to communicate via high-quality and easy-to-use devices.

For modern companies looking to fully exploit the opportunities presented by IP technology it opens up access to the carriers who will provide future Internet telephony.

The Best IP Solution You Can Get!

HiPath 2000 guarantees secure, high-quality, flexible, and reliable IP communication:

- IP telephony uses a wide range of security features for protecting voice communication against hackers and viruses
- Maximum failure tolerance protects communication
- Quality of Service (QoS) guarantees a continuously high level of voice quality and assigns the highest possible priority to voice communication

HiPath 2000 provides you with all the advantages of IP communication without compromising on current TDM telephony functions.

Further Advantages of IP Communication

- Low purchase costs, a single system that combines a DSL router and gateway
- Simple setup via pre-installed software (plug & play)
- Low operating costs with network-based IP technology
- Reduced maintenance and administration costs with Web-Based Management
- Secure IP communication via IPSec and VPN
- Flexible expansion via user licenses
- Cost-effective integration into HiPath networks via CorNet IP/SIP

IP Functions

- **DSL router function:** Provides multiple data subscribers with access to the Internet, whilst incoming data is sent to the addressee (DHCP, NAT/NAPT).
- **Gatekeeper:** Registration of all IP terminals (telephone, PC, client) prevents unauthorized access.
- **Gateway:** IP data packets for signaling and voice data are converted using the TDM-based protocol to enable transmission to internal analog terminals or telephone networks (both directions).
- **Firewall:** Only allows access to selected IP/port addresses to provide external protection for the company's voice and data network.
- **Desk sharing mobility:** By entering a mobile PIN, employees can log on and access their individual telephone settings at any workstation.
- **Virtual Private Network (VPN):** IPSec encryption and authentication provide a secure company network at all locations. Remote LAN access integrates external telephones and branch offices into the system and guarantees voice features, ensuring that corporate data exchanged via the Internet remains confidential.
- **CorNet IP:** IP-based protocol for signaling and voice communication provides voice features for LAN subscribers.
- **Session Initiation Protocol (SIP):** Standard protocol for IP telephony that is compatible with the architecture of conventional Internet applications.
- **Quality of Service (QoS):** Voice communication is always assigned the highest transmission priority in IP networks so that voice data can be sent quickly and without any loss of quality.
- **Codecs:** Voice data is transmitted in IP according to the standards G.711/723/729.

HiPath ComScendo

Features

Caller list: Unanswered internal and external calls are listed by system telephones with display, provided the external numbers include a directory number (ISDN) (caller identification). Internal calls show the name of the caller. The calls are listed with date and time, and the number of attempted calls are recorded. A callback can also be initiated via this list.

Do Not Disturb/On-hook: Users can reject incoming calls. When Do Not Disturb is activated, callers hear the busy tone. Authorized users (e.g. the operator) can override this function. Acoustic signaling can be deactivated in system telephones so that calls only appear on the display.

Call pickup: Users can pick up calls within a call pickup group or selectively for individual colleagues in a single node or across networked nodes on their own telephones.

Intrude: Authorized stations can intrude on other users' calls in progress.

Call Barring: Various classes of service can be allocated to each station user. Users can be given:
- Unrestricted toll access
- Restricted toll access
- No toll access

Paging (Internal Announcement): To system telephones or over external loudspeakers.

Call charge logging: For each terminal or trunk in the summation memory. Call duration is displayed for lines without call charge pulses. (Call Accounting requires the purchase of external equipment.)

Group call: For a total of 20 groups with up to 20 users per group. Individual stations can leave the group temporarily.

Trunk keys (MULAP)
The following flexible setups are possible with trunk keys:
- Teams
- Executive/secretary functions
- Feature handset (Gigaset) in parallel with a system telephone on a single call number (only in conjunction with HiPath Cordless).

LDAP interface: For access to internal telephone directories with a direct dial option via telephone.

Internal telephone directory: All extensions are stored with their associated names in the system's internal telephone directory. They can be searched and dialed directly via the display on system telephones.

Speed dial for individual station/system: All systems enable up to 10 destinations to be stored individually on each telephone and up to 1000 centrally in the system. System numbers are accessible via the internal telephone directory.

Toggling: Between two existing connections.

Text messages: Users can send predefined (e.g. "visitor waiting") or individually composed short messages (only optiPoint 600 office with USB keyboard) to other users with display phones.

Internal text messages: Internal text messages can also be sent to feature handsets (in conjunction with HiPath Cordless Office).

Advisory messages: You can record advisory messages on your telephone (e.g. back at:....).

Project code: Telephone costs can be assigned to a specific procedure or project by entering the project code (max. 11 digits). This can also be done while a call is in progress.

Call number suppression: Callers with ISDN connections can prevent their call number being sent to the terminal of the station called.

Call signaling: Different call ring tones can be set for internal calls, external calls, recalls, and callback calls.

Multi-telephone ringing: Call ringing simultaneously at several telephones.

Door interface: For entrance telephone and door opener functions. Calls from an entrance telephone can be transferred to external destinations via external call forwarding.

Automatic redial (expanded): For the last three external telephone numbers dialed.

Music on hold: Individually-loadable MoH melodies. Ten standard melodies are provided.

Standard Functions

- **Intercept position e.g. route to the operator**
- **Camp-on/call waiting tone**
- **Call forwarding from the extension**
- **Display languages** (can be specified individually)
- **Conference** (internal/external)
- **Line seizure** (automatic)
- **Music on hold**
- **External music source** (optional)
- **Night service/day service**
- **Park**
- **Consultation**
- **Call back** for busy line (when free) and unanswered call (when next used)
- **Call forwarding/Divert** - no answer, no reply
- **Hunt group** (linear/cyclic)
- **Lock telephone block** (individual code lock)
- **Telephone book, central**
- **Transferring a call** (internal/external)
- **Recall** from public network operator

Attendant Consoles

optiPoint Attendant

An optiPoint system telephone can be used as an attendant console. This can be organized as an information, intercept, or night service station.

The attendant console can be accessed internally via a second directory number.

If the number of users on hold reaches a preset level, calls will be forwarded to a specified destination. This will also take place when the length of time a call is queued exceeds a specified limit.

optiClient Attendant

This software package simulates an enhanced attendant console on a PC's screen. All features can be activated and executed via the PC keyboard and mouse.

The PC Attendant can be connected via IP.

optiPoint BLF

The busy lamp field (BLF) is an additional module principally for optiPoint Attendant. BLF has over 90 freely programmable function keys which show a station's call status via LED (free, busy, called).

Administration

Web-Based Management (WBM)

Standard HiPath 2000 administration and maintenance functions are integrated in the system. These can be accessed via Web-Based Management (standard browser).

HiPath 2000/3000 Manager E

Service technicians use HiPath 2000/3000 Manager E software for administration.

This software provides the service technician with an expert tool that includes all set-up, maintenance, and diagnostic functions.

Hotdesking/Mobility (IP Telephones)

These features enable several users to share a workstation or to work as teleworkers from home keeping their extension numbers. The telephone retrieves personal settings when the user logs on. Extension numbers, station features, and key labeling* remain unchanged (*for optiPoint 420 with self-labeling keys).

Licensing

System and IP workpoints are released via licenses.

Data Protection/Data Security

To protect the communication system and customer data from unauthorized access, the Service menu can only be entered by means of individual user IDs.

User Solutions

Integrated VoiceMail (HiPath 2030 only)

This solution is an integrated voice memory system for deferred and location-independent storage, retrieval, and distribution of voice messages with:

- up to 24 individual mailboxes
- two-hours' recording capacity
- a maximum message duration of one minute
- a choice of two personal greetings

The "Auto Attendant" function redirects callers to another station, for example, if a line is busy.

HiPath ProCenter Compact

is the professional, cost-effective call center software solution for up to 32 agents. This allows optimum telephone-based customer service transactions - from order placement to complaints management.

HiPath ComAssistant

ComAssistant is a server-based CTI solution for the intranet. Software is installed and configured centrally on the server. This ensures the quick and easy distribution of data via the intranet.

HiPath SimplyPhone

HiPath SimplyPhone is the ideal solution for workstations that use Lotus Notes or Outlook 98 as a universal communication and organization tool.

HiPath TAPI 120 and HiPath CAP

The driver software was developed as a supplement for connecting a PC to digital system telephones on HiPath. CTI applications conforming to TAPI are therefore integrated. Supported CTI applications are: HiPath Simply Phone for Outlook and Lotus Notes, and HiPath ComAssistant.

TeleData Office

Calculates the costs of all communication services (telephone, fax, Internet) and enables analysis according to extension, trunk or department. The communication data can be transmitted directly via a LAN interface to a central server for analysis. An extensive range of server-based applications for call centers and unified messaging are also available, as well as a high performance LAN interface.

HiPath Fault Management

Supports maintenance staff in permanent operational monitoring of the communication technology, following up even the slightest indication of developing faults and finding an immediate remedy.

Telephones

optiGuide provides interactive user prompting via display and dialog keys and allows features to be activated via digital system telephones and IP telephones.

The following telephones can be connected to HiPath 2000 to meet the most varied workstation requirements:

optiPoint 410/410 S

These IP telephones offer optimum voice quality:

- optiPoint 410 entry
- optiPoint 410 economy
- optiPoint 410 economy plus
- optiPoint 410 standard
- optiPoint 410 advance

optiPoint 420/420 S

Top-class IP telephones with self-labeling keys:

- optiPoint 420 economy
- optiPoint 420 economy plus
- optiPoint 420 standard
- optiPoint 420 advance

optiPoint 600 office

The top model with illuminated touch-screen display. This can be used as a digital telephone or as a data access device to the IP network.

WLAN Telephones

- optiPoint WL2 professional/WL2 professional S
- All standard DECT terminals are connected via the analog (T/R) or S_0 port on HiPath 2000

Add-On Devices

optiPoint key module

16 additional dual-programmable function keys with LED.

optiPoint display module

Easy access to information in databases or online services.

optiPoint self labeling key module

13 self-labeling keys with LED and display

optiPoint application module

Add-on device with color display and integrated alphanumeric keypad

optiPoint BLF

Add-on device for optiPoint 500 telephones with 90 function keys and LEDs.

Adapters

A wide range of adapters are available offering a high level of flexibility when it comes to meeting the requirements of individual workstations.

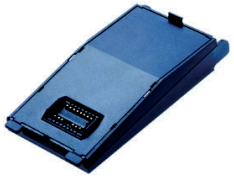
These include:

optiPoint acoustic adapter

For connecting active loudspeaker box and headset. Two contacts for busy display and door opener.

optiPoint recorder adapter

For connecting a recorder or a second headset.



Soft Client

optiClient 130 V5.0

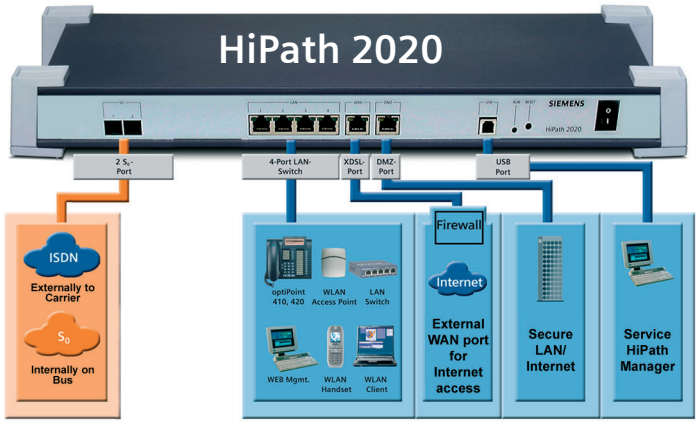
optiClient 130 turns your PC into a telephone, making it the hub of communication by voice, data, e-mail, and Internet.

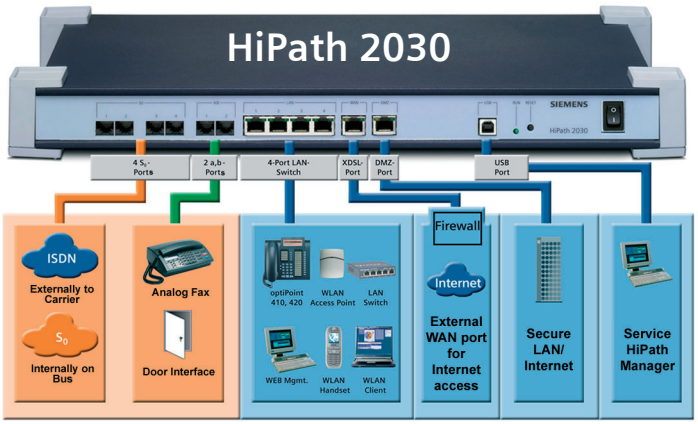
IP Networking

- Costs are reduced in HiPath networks via IP trunking and cost-optimized "break out" from a company network into the public network.
- IP networking uses existing customer networks for voice communication.
- The CorNet IP protocol enables flexible branch concepts to be realized in networks between HiPath 2000 and HiPath 3000/4000/5000 systems.
- Implementing one or more attendant consoles in HiPath 3000 networks with HiPath 2000 nodes increases the efficiency of existing resources.

Technical Data

	HiPath 2020 Branch Solution	HiPath 2030 Standalone Solution
Workpoints	● Up to 20 IP workpoints	● Up to 30 IP workpoints
Hardware Models	● ROW = 2 x S_0 (can be configured as a station or trunk) ● USA = 1 x T1	● ROW = 4 x S_0 (can be configured as a station or trunk) ● USA = 1 x T1 ● 2 x T/R (for subscriber line)
	● Four-port LAN switch for direct connection of IP workpoints or additional branching into the customer's LAN infrastructure ● 1 x WAN for connection to the public network (provider) ● 1 x DMZ for "DMZ-like" operation or connecting a WLAN access point ● 1 x USB (USB V1.1, slave mode) for service purposes	
Integrated Voice Mail	–	X
Web-Based Management (integrated)	X	
Installation Options	Desktop/wall-mounted and 19" models, space required in 19" rack = 1 height unit	
Dimensions	Width = 440 mm (478 mm including housing feet) Height = 44 mm (55 mm including housing feet) Depth = 240 mm	
Color	Steel blue/arctic gray	
Power Supply	Systems, by default, are designed for network operation. Possible power outages can be optionally bypassed with an (external) uninterruptible power supply (UPS). **Rated Input Voltage (AC)** 88 - 264V **Rated Frequency** 50/60 Hz **Battery Supply (DC)** -48 V	
Environmental/Operating Conditions	**Temperature** +5°C to +40°C **Relative Humidity** 5 - 80%	





Our strengths - Your advantages

Siemens is known worldwide as a trailblazer in the advancement of information and communication technologies. No other company offers such a comprehensive and innovative portfolio.

Regardless of which communication technology you are using today – or want to use tomorrow – Siemens offers you the right solution.

www.siemens.com/hipath

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